



lib_dfu: Device Firmware Upgrade (DFU) (README)

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vendor	XMOS
version	2.0.0
scope	General Use
description	Device firmware upgrade over a serial interface
category	General Purpose
keywords	Utility, USB, Serial interface
devices	xcore-200, xcore.ai

1 Summary

The Device Firmware Upgrade (DFU) library provides functionality to facilitate firmware updates over almost any transport physical layer. It includes support for handling DFU packets, managing firmware images, and ensuring the integrity of the update process.

2 Features

- ▶ One upgrade slot
- ▶ Support USB DFU spec v1.1
- ▶ Support for custom transport layers

3 Known issues

- ▶ USB example reports several warnings such as “port “XS1_PORT_1F” on tile[0] is not connected to any pins in this package.”, this is normal on small packages that do not have all the pins bonded out.



- ▶ The `lib_device_control` client handling currently consumes an additional thread as it is not distributable.
- ▶ For DFU over I2C the bus speed of up to 100kbps is supported. This is also supported with no clock stretching for all commands except `upload`.
- ▶ For DFU over I2C, when exiting from DFU mode, the device reboots which interrupts the host communications, the host reports an error, but this does not affect the result.
- ▶ DFU_ABORT request is supported in upload but not in download.

4 Development repo

- ▶ `lib_dfu` (https://www.github.com/xmos/lib_dfu)

5 Required tools

- ▶ XMOS XTC Tools: 15.3.1 or later

6 Required libraries (dependencies)

- ▶ `lib_logging` (https://www.xmos.com/libraries/lib_logging)
- ▶ `lib_xassert` (https://www.xmos.com/libraries/lib_xassert)

7 Related application notes

- ▶ AN02019 - Device Firmware Upgrade over USB (<https://www.xmos.com/application-notes/an02019>)

8 Support

This package is supported by XMOS Ltd. Issues can be raised against the software at www.xmos.com/support or using GitHub [issues](#).



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